

Notice of Allowability

Application No.

10/686,596

Examiner

David V. Bruce

Applicant(s)

BRUDER ET AL.

Art Unit

2882

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Telephonic interview of 8/26/08.
2. ☒ The allowed claim(s) is/are 1,3,5-10,12-15 and 17-53.
3. ☒ The drawings filed on 15 March 2004 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Andrew Waxman on August 26, 2005.

The application has been amended as follows:

CLAIMS

17. (Currently Amended) The method as claimed in claim ~~[[16]]~~ 13, wherein the prescribed angular range for a spiral segment of length L_s is $\leq \Pi + 2 * \beta_{\max}$.

18. (Currently Amended) The method as claimed in claim ~~[[2]]~~ 1, wherein the prescribed angular range for a spiral segment of length L_s is $\leq \Pi + 2 * \beta_{\max}$.

37. (Currently Amended) The method as claimed in claim ~~[[4]]~~ 5, wherein the segment planes formed at least approximately by the spiral segments have a maximum inclination such that rays for the segment plane in the detector are present inside the measuring field at the ends of the spiral segment considered.

38. (Currently Amended) The method as claimed in claim ~~[[4]]~~ 5, wherein, for the purpose of 3D back projection a spiral segment I_1 of length $L_1 = [-\alpha_{\max}, +\alpha_{\max}]$ with $\alpha_{\max} = M \cdot \pi/p$ is subdivided equidistantly into N_{tilt} overlapping partial segments I_1^k ($1 \leq k \leq N_{\text{tilt}}$) of length L_s , whose centroids differ from one another by at most L_s , p corresponding to the set pitch, such that the following holds for the subsegments I_R^k ($1 \leq k \leq N_{\text{tilt}}$) produced:

$$I_R^k = I_1^k; 1 < k < N_{\text{tilt}}$$

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$$I_R^1 = I_I^1 \cup \{-\alpha^v \max, -\alpha \max\}$$

$$I_R^{N_{\text{tilt}}} = I_I^{N_{\text{tilt}}} \cup \{\alpha \max, \alpha^v \max\}$$

and the projection datum, belonging to an image voxel, in the detector image D_k is determined by projection in the reconstruction segment I_R^k ($1 \leq k \leq N_{\text{tilt}}$), α^v_{\max} representing the maximum angle reached by the ray through the voxel V .

39. (Currently Amended) The method as claimed in claim [[4]] 5, wherein the measured absorption data is weighted as a function of the cosine angle of the ray produced in the direction of the axis of rotation of the detector and radiation source.

40. (Currently Amended) The method as claimed in claim [[4]] 5, wherein the detector is of planar design and includes a multiplicity of detector elements arranged matricially in rows and columns for detecting the spiral scanning.

41. (Currently Amended) The method as claimed in claim [[4]] 5, wherein the scanning of the object is done by rotating ray bundle moving in the direction of the axis of rotation.

42. (Currently Amended) The method as claimed in claim [[4]] 5, wherein the projecting of the measured absorption data onto a virtual detector is done at a fulcrum of the rotation.

43. (Currently Amended) The method as claimed in claim [[4]] 5, wherein the filtering takes place along the intersection line of doubly inclined planes in the virtual detector.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David V. Bruce whose telephone number is (571) 272-2487. The examiner can normally be reached on M - Th and alt Fri 8:00 - 4:30 subject to I-Flex.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward J. Glick can be reached on (571) 272-2490. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



David V Bruce
Primary Examiner
Art Unit 2882

dvb